

Prevent Environmental Pollution to Create Clean Cities for the Healthy Lives of People

JICA addresses waste, water and air pollution,

and other environmental problems

that cause health problems,

to create clean cities.

In many partner countries, industrialization and urbanization are progressing without environmental measures, causing serious contamination of water, air, and soil, and damaging people's health. Through measures such as waste management and the prevention of water and air pollution, we work together in creating "clean cities" and aim to build sustainable societies.

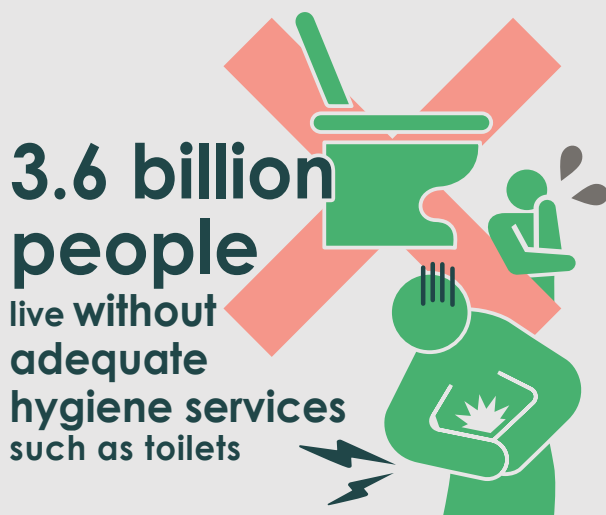


Piles of waste that keep increasing and plastic waste in the ocean

In partner countries, a large volume of garbage is left uncollected in towns. Even after garbage is taken to a waste disposal site, it is not processed appropriately and is left decomposed in piles, causing methane emissions and air, soil, or water pollution. The toxic substances generated from burning waste are extremely dangerous, as they threaten the health of residents. In recent years, plastic waste in the ocean has grown to a staggering volume of about 8 million tons a year, causing serious problems such as deterioration of the marine environment including its ecosystem and negative impact on the fishing and tourism industries.

Residential and industrial wastewater released to the environment is causing serious health problems

Releasing residential and industrial wastewater that has not been appropriately treated to the environment lowers the water quality of rivers and coastal waters and contaminates underground water and soil. As many as 3.6 billion people around the world live in an environment without proper hygiene services such as toilets and have no choice but to drink contaminated water and eat contaminated food such as seafood. This is causing serious health problems, such as waterborne diseases including diarrhea, dysentery, and cholera, and serious long-term illnesses such as Minamata disease and Itai-itai disease in Japan, making it imperative to take actions.



In Sub-Saharan Africa, 70% of Waste is left in uncontrolled disposal sites



The fourth biggest cause of death in the world is air pollution caused by industrial activities and cars

Air pollution caused by fossil fuels used in industrial activities and the emission of gases from cars is said to be the fourth biggest cause of deaths in the world. It is estimated that 6.67 million people died from air pollution in 2019. There are also serious health problems caused by airborne particulate matters (PM2.5), which can easily penetrate into the lungs. Air pollution is not only harmful to human bodies but also a cause of global environmental problems such as environmental devastation caused by acid rain and climate change caused by greenhouse gas emissions. We need actions such as scientific evidence-based emissions regulations on the substances that cause air pollution.

According to data released in 2019 6.67 million people died from air pollution



Environmental measures in partner countries also concern Japan's environment and public health

Japan experienced environmental problems such as air pollution and water quality deterioration as a result of placing priority on economic activities after the Second World War. In response, legal systems have been organized since the 1970s, under which public offices, local governments, companies, residents, and other groups have been working together. Japan is currently working on creating a sound material-cycle society that can attain both economic efficiency

and environmental conservation. Utilizing the human resources and technological capabilities developed in this process, JICA can help partner countries solve these problems. Our cooperation has great significance; improving the environment in partner countries will help overcome global environmental problems and infectious diseases, which are also related the environment and public health in Japan.

Approach 1

Improvement of waste management and promotion of a sound material-cycle society

To establish a waste disposal system, we need to create a structure to categorize waste, obtain quantitative data, and collect and transport waste to disposal sites. To this end, we enhance the abilities to survey the status of waste and to manage data, and create plans and rules for collecting, transporting, and disposing of waste. We improve waste disposal equipment and facilities. In the next stage, we reduce waste by promoting the 3Rs of waste management – Reduce, Reuse, and Recycle. Furthermore, JICA support the producer responsibility system to control waste generation, and policies to promote the effective use and recycling of resources with the aim of shifting toward a sound material-cycle society.

- 1 Create and implement a system to collect, transport, and dispose of waste
- 2 Reduce waste by introducing segregation and recycling
- 3 Support policies that reduce waste generation and promote effective use of resources

Approach 2

Promotion of healthy environment through appropriate environmental regulations and pollution control measures

JICA promote the introduction of equipment and the organization of systems to survey and analyze the negative impact that pollutants have on the environment and health. We then take measures targeting each pollutant based on the identified scientific evidence, establish standards, if necessary, and develop policies and legal systems. To control pollutant generation, creating a monitoring system for a wide area is also necessary. In addition, implementing projects and organizing and operating wastewater treatment facilities require a sustainable operation system and long-term, large investments. To enhance financial foundations, JICA also provide finance-related support.

- 1 Enhance the ability to analyze pollutants to understand the current problems
- 2 Develop and implement counter-pollution measures based on scientific evidence
- 3 Strengthen controls over pollutant generation while promoting investments in environmental measures



Basis for Common Initiatives

Develop human resources who will be in charge of actions ranging from organizing facilities and legal systems to raising social awareness

Partner countries need to overcome many challenges in order to create “clean cities” where people can live safely with the appropriate disposal of waste and the prevention of air and water pollution. For instance, they need to organize waste disposal and wastewater treatment facilities and secure technological support and a financial foundation needed for them. In addition to administrative organizations that develop and execute policies and legal systems based on the scientific understanding of the cause of pollution, it is important that businesses comply with regulations and that citizens have environmental awareness. In all these aspects, the key is human resources with specialist knowledge. To raise social awareness about health and the environment and transform citizens’ behaviors, we need human resources who can exercise leadership. To achieve the best outcome, JICA provides support with a focus on human resource development.

Challenges of partner countries



1 Strategic initiatives, including green growth, in Ha Long Bay, Vietnam - a world heritage site

In Quang Ninh Province where Ha Long Bay is located, economic development rapidly progressed with the establishment of an economic zone and industrial park and a surge of domestic and overseas investments, while deterioration in water quality in the coastal waters became noticeable due to industrial wastewater and other reasons. JICA began working on improving the environment of the area in the second half of the 1990s. One of these approaches is the use of the "Lake Biwa Model" which improved the water environment of Lake Biwa in Japan. In collaboration with Shiga Prefecture, Osaka Prefecture University, and the Ohmi Environment Conservation Foundation, we developed organizations to conduct water quality research and to use data, offered environmental education to residents, and developed environmentally friendly eco-tourism, etc. We are focusing on green growth initiatives that promote economic growth and regional development while protecting the natural environment.



photo: Getty Images

Ha Long Bay is registered as a world heritage site and is a popular tourist spot dotted with limestone islands. Our goal is to achieve economic growth while recovering clean water and protecting the environment.

photo: © Yachiyo Engineering Co., Ltd.



In Dhaka, garbage collection cars began collecting garbage at designated times and places, which raised the garbage collection rate.

2 Garbage collection rate improved significantly from 44% in 2004 to 85% in 2021 in Dhaka, Bangladesh

In Dhaka, the capital of Bangladesh, JICA is improving waste management in phases under the Clean Dhaka Project. In the first phase, more than 50 out of the city's 90 districts introduced residents' participation-based waste collection and management, collecting garbage at designated times and places, which raised the garbage collection rate. Next, improvements were made to control water contamination and methane gas generation in the final disposal site of collected waste. Furthermore, environmental education has changed the residents' awareness, increasing their understanding of the importance of waste reduction. Going forward, we will work on waste segregation and recycling to create a sound material-cycle society.

Collaborating with Partners

In addition to collaborating with domestic and overseas organizations and institutions, we use frameworks for wide-area support

Under the JICA Clean City Initiative (JCCI) which aims to create "clean cities" in partner countries, JICA is enhancing collaboration with relevant ministries, local governments, and private companies in Japan, overseas providers of technologies and funds, and international organizations. JICA will also

promote wide-area support initiatives such as J-PRISM (Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries) and ACCP (African Clean Cities Platform), to jointly create new values.



Japan International Cooperation Agency (JICA) is an international cooperation organization that is centrally responsible for the implementation of bilateral assistance among Japan's Official Development Assistance. JICA cooperates with about 150 countries and regions around the world.

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https://www.jica.go.jp/english/our_work/thematic_issues/index.html

What is Global Agenda?

JICA's cooperation strategies for global issues. JICA, with its partners, aims to show global impacts realizing the goals set under JICA Global Agenda. JICA Global Agenda and its goals will be shared among partner countries and various actors, enhancing dialogue and collaboration, therefore, maximizing the development impacts. Through these efforts, JICA will comprehensively contribute to the achievement of the SDGs by 2030 as well as realize Japan's Development Cooperation Charter which focus on "human security," "quality growth," and "addressing global challenges".

Cover Photo- Waste segregation in Kataragama, Sri Lanka. Sorting out fruit and other food waste that can be turned into compost quickly. photo: Yusuke Abe